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ABSTRACT

This Working Note documents the first year's events and outcomes in developing the budgeting system and resource allocation rules to support the Education Voucher Demonstration. The district now has systems for per pupil resource allocation and school/minischool cost center accounting. The basic voucher of $1,041 for grades 7-8, and $788 for grades K-6 covers the general instructional cost at the school site and a share of central district support. A compensatory voucher ($301 for grades 7-8, and $237 for grades K-6) provides additional funds for students eligible for federal free lunch and represents "discretionary" income at the minischool level. The budgets of minischools depend on enrollment and differ mostly in use of discretionary funds, thus planned expenditure patterns of compensatory voucher income were constructed, and comparable minischool instructional cost per classroom indexes were developed. The actual cost per student varied from $577 to $744. The voucher demonstration increased the speed with which the district achieved the management capability to operate in a decentralized mode. One important impact is the creation of the minischool alternatives--alternatives that used resources in different combinations--to provide elementary education. (Author/DW)

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RESOURCE ALLOCATION AND BUDGETING FOR THE 1972-73 MINI-SCHOOLS OF THE ALUM ROCK VOUCHER DEMONSTRATION

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ANALYSIS OF THE EDUCATION VOUCHER DEMONSTRATION

A WORKING NOTE

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PREFACE

The Education Voucher Demonstration is a large-scale social intervention with a wide range of social, political, economic and educational objectives. The demonstration began in Alum Rock, California in September 1972. Funded initially by the Office of Economic Opportunity, it is currently supported by the National Institute of Education. The voucher model originally considered by OEO included both public and private schools. The model currently being tested in Alum Rock differs from this plan in that only public schools participate in the project. Six schools were in the demonstration in 1972-73, with seven additional schools joining for the 1973-74 school year.

Since April 1972, Rand has been performing a wide range of study and analysis tasks related to the demonstration. The objectives of Rand's work include:

- Documentation of events and outcomes in the demonstration;
- Analysis of social, political, economic and educational impacts of diverse aspects of the demonstration;
- Delineation of secondary impacts such as organizational changes and instructional innovations; and
- Identification of implications of the voucher concept for federal, state and local education policies.

This Working Note was prepared pursuant to NIE Contract B2C-5326, and is one of a series of Notes that are published from time to time on selected analysis topics. The Working Note series is designed to transmit preliminary research results to NIE, and should not be interpreted as presenting definitive conclusions about voucher demonstration outcomes.

For readers interested in additional background on the origins and concept of the voucher demonstration, or the work being performed by Rand, a brief bibliography has been included.

SUMMARY

This Working Note documents the first year's events and outcomes in developing the budgeting system and resource allocation rules necessary to support the Education Voucher Demonstration. It is slightly inappropriate to describe as monumental the effort the development demanded. But, the impacts on the management of the district and on the voucher schools' use of resources might well be described by just such a term.

The district, as a result of the operational pressure of the voucher demonstration, now has not only a per pupil resource allocation system (an enrollment economy), but also a school/mini-school cost center accounting system. This school level income/outgo budgeting system represents substantial advance in school district management. Moreover, resource use by students at the classroom level can be delineated with only a little extra-system manipulation of the data.

In the few months before the opening of school in September of 1972, tentative budgets for the six voucher schools and their 22 associated mini-schools (intra-school groupings of classrooms) were constructed using modified current budget-making practices. Interim procedures for budgeting and accounting and initial values of the basic and compensatory vouchers were also established. During the 1972-73 school year, the resource allocation rules were set-up and both the conceptual basis and the mechanics of the mini-school income/outgo budgeting system were developed. In addition some, but not all, of the central district support services have been vouchierized.

The basic voucher for all voucher students covers the general cost of providing educational services at the school site and a share of central district support. The basic voucher of $1041 for middle school (grades 7 and 8) students is higher than the $788 for elementary (grades K through 6) students, reflecting a historical difference in dollars per student needed to cover educational services. The basic voucher is approximately equal to the basic elementary and middle school program expense per student of previous years and for nonvoucher schools in the 1972-73 school year. The compensatory voucher ($301 for

7th and 8th grade students and $237 for students in grades K through 6 provides additional funds for those voucher students who are eligible for the federal free lunch program and represents "discretionary" income at the mini-school level. Both the basic voucher and the compensatory voucher dollars were, by design, to constitute the "income" of the mini-school and were to follow the student as inter-mini-school transfers were made. This did not, however, become a reality during the first year of the demonstration, due partly to the inadequacy of the existing management support systems and partly because it took longer than expected to establish the resource allocation rules.

For example, a new student attendance system--the ARAS--had to be designed to replace the inaccurate and slow system. The income/outgo budgeting system development, per se, also took more than a year even though the district staff had outside assistance. The main products of the system are the monthly mini-school *income* and *expenditure* budgets and the cost analysis report.

Beyond the managerial changes wrought by the voucher demonstration lies the resource impact on the voucher schools and their mini-schools. The 22 mini-schools represent alternative educational choices for the students of the six voucher schools. The budgets for each mini-school depended on the enrollment of the mini-school. The *total* budget for each mini-school--the income from the basic voucher, the compensatory voucher, and other funding sources (e.g., the Model Cities Program and Miller-Unruh Reading Program)--ranged from a low of $56,000 for a small mini-school to a high of $214,000 for the largest mini-school. The compensatory voucher budget or the discretionary income for the mini-schools ranged from $12,000 to $57,000, depending on the number of students eligible for the federal free lunch program.

Because the income from the basic voucher was earmarked for "regular" instructional purposes such as teacher salaries and general operating expenses, the mini-schools were different from one another mostly in their use of their discretionary income from the compensatory voucher. For this reason, the planned *expenditure patterns* of the compensatory voucher income were constructed. These patterns highlight differences among the mini-schools that are obscured by a simple examination of the traditional budget categories, such as, Other Expenses of Instruction.

Because the actual salaries of teachers differed across mini-schools and because we were interested in determining variations in resource-use, a comparable mini-school instructional cost per classroom (and per student, using 30 students to a classroom) was developed. This index-like measure sheds additional light, in an equitable manner, on differences among the mini-schools.

In developing the comparable instructional cost per classroom or per student, only the resources directly involved in the instructional process are included; pro-rated salaries of school-site administrators and salaries of administrative support staff and operational support staff are not included. In addition, "standard" salaries and prices are used for the same type of resource.

The comparable instructional cost per classroom ranged from a low of $17,300 to a high of $22,300 per classroom. Thus, the comparable instructional cost per student, using thirty students to a classroom (regardless of the actual enrollment) varies between a low of $577 and a high of $744. Here, the interesting point is that one mini-school, using the comparable cost index as a measure, is providing relatively similar elementary level education with a combination of resources that is approximately 23 percent less than another. Assuming, of course, that the outcomes of the lesser combination of resources are acceptable, this could have a measurable impact on the district budget total.

In sum, the voucher demonstration increased the speed with which the district achieved the management capability to operate in a decentralized mode: school and mini-school budgets were developed as part of the income/outgo budgeting system; and a new student attendance was designed and used. Perhaps, the most important impact is the creation of the mini-school alternatives--alternatives that used resources in different combinations--to provide elementary education to the students of the district.

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I. INTRODUCTION

In the first year of the Education Voucher Demonstration in Alum Rock, California, five elementary schools and one middle school with an average enrollment of 650 students reorganized into twenty-two mini-schools with an average enrollment of 175 students. The mini-schools ranged in size from a low of two to a high of twelve classrooms with an average of six classrooms. The original school serves as the host school site for either three or four mini-schools. Goss and Miller each have three mini-schools while Cassell, McCollam, Meyer, and Pala (the middle school) each have four mini-schools.

The mini-schools are, in effect, organizational entities with their own instructional strategies and different mixes of resources. The primary purpose of this Working Note is to explore the resource allocation procedures under the voucher concept. A secondary purpose is to quantify the differences in resource-use and dollar cost among the twenty-two mini-schools of the 1972-73 school year. A particular emphasis is placed on how the mini-schools spent their compensatory voucher funds. These monies are for the discretionary use of the faculties of each mini-school and are over and above the basic voucher allocation and the school-wide allocations for voucher-related administrative support and in-service training activities.

The existence of discretionary compensatory voucher funds and, naturally, the underlying voucher concept provide the basis for expecting the mini-schools to be different from one another in the way they use resources. This expectation is borne out in the information presented here and in WN-8403-NIE, *Instructional Aspects of the 1972-73 Mini-School Programs in the Alum Rock Voucher Demonstration*. Some mini-schools made a more extensive use of instructional aides while others spent more money on instructional materials. It is important to establish a good baseline picture because the 1972-73 mini-schools represent a particular allocation of resources that may well change as a result of parent/student choice of different mini-schools in subsequent years.

The mini-school budget data are used to develop expenditure patterns for each mini-school. The records of requisitioned instructional materials and services are organized to provide, from a data source other than the budgets, supporting information about the ways mini-schools spent their money. The intention is not to provide an audit function but rather to shed light on mini-schools' use of resources in carrying out their instructional activities. The data base includes data from district-published records, observations made during the year and discussions with mini-school faculties.

An additional section deals with estimates of a comparable classroom instructional cost for each of the mini-schools. The comparable classroom instructional cost goes beyond the simple documentation of resource use by providing an equitable measure of a mini-school's use of a particular combination of resources. Ultimately, information of this kind will be a necessary input in assessing the impact of the voucher concept on the cost of education.

The comparable classroom instructional cost for each mini-school differs from the traditional indicator of cost per student in that it encompasses only direct instructional cost-generating activities. For example, a pro-rated share of the principal's salary is not included. The usual practice in estimating a mini-school's budget is to use a cost per student for the principal's salary (varied from $25 to $50 per student) and multiply by the number of students in the mini-school. Under this practice, the smallest mini-school in the largest host school really lucks out while the largest mini-school is penalized. The comparable classroom instructional cost provides an equitable measure of the mini-school's use of resources. In an index, this measure permits the identification of the more efficient mini-schools.

II. ALLOCATION OF FINANCIAL RESOURCES TO SCHOOLS

The current school district practice today is *in kind* allocation of instructional resources to schools. Under this system, all schools receive the services of certificated teachers and instructional aides, custodial services, pencils, reams of paper, dictionaries, and so forth, in direct proportion to their enrollments. Usually, school administrators and faculty are not given discretion to trade one kind of resource for another kind. And, further, under this allocation procedure, a teacher whose salary is $8,000 is considered the equivalent of a teacher whose salary is $16,000. The school employing the more expensive teacher is not viewed as receiving $8,000 more of educational resources (or, of taxpayer money) than the school having the services of the lower salaried teacher.

Until the fall of 1972, resources were allocated *in kind* to all schools in the district. In this section, we will describe the changes which have occurred in the resource allocation system during the first year and a half of the demonstration.

Financial Voucherization

Alum Rock has attempted to implement two basic tenets of voucher theory which represent departures from traditional school district resource allocation practices:

1) That schools should receive dollar incomes which may be spent at the discretion of the school staff.
2) That the amount of dollar income of a school should be a direct function of the level of the school's (weighted) enrollment.

The first principle means that schools would receive unobligated funds for the creation and operation of a unique, alternative educational program. The second principle implies an enrollment economy with resources flowing to instructional units in response to consumer demand.

In Alum Rock these concepts have been partially realized. In the discussion which follows we will describe the system of financial voucherization which has been implemented in Alum Rock.

The Alum Rock model has not included voucherization of all the district's centralized support services. Instructional units (mini-schools) do not have discretion concerning the purchase of centralized district-wide services such as nursing, attendance, busing, business, personnel, community relations, and other support activities. The dollar cost of these functions was approximately $260 per pupil in 1972-73--more than a third of the total elementary basic voucher and one-fourth of the seventh and eighth grade student basic voucher value. Theoretically, instructional units, once having received their voucher income from students, would then contract with the central office to provide whatever services the staffs of particular schools desired. Thus, strict voucher budgeting would disregard historical patterns of financial support for various central and support functions and a new pattern of budget support would arise solely from patterns of parent choice of schools and, in turn, from the schools' contracting for centralized services.

Budgets have been set up for existing central personnel in their existing jobs. The amount per pupil of the central service "pay-back" has been calculated by dividing the financial commitment to current central staff, plus associated operational expenses, by the total number of students in the district. This per pupil charge, when multiplied by the number of pupils, yields the mini-school's share of district expenses which must be reimbursed. The difficult question of the "proper" proportion of total district income that should be allocated to the central office as opposed to school sites is answered in Alum Rock by continuing past patterns and the jobs of existing personnel are thereby protected.

Calculation of the Site Basic Voucher Value. The portion of the total basic voucher value which is used to pay for instructional resources in the schools is called the "site" basic voucher value. In Alum Rock there are two site voucher values: one, for students in grades kindergarten through six, was $528 in 1972-73; the other, for seventh and eighth grade students, was $782. The higher value for the upper level pupils reflects the historic difference between expenditure for middle and elementary school students in Alum Rock.

Theoretically, the site values should be determined by dividing the amount of district income which *remains*, after subtracting necessary central administrative expenses, by the total number of students. In Alum Rock, however, the pot of money available for site vouchers is calculated by summing all outstanding salary obligations at the school level (principals, assistant principals, librarians, teachers, secretaries, and custodians) plus an amount for other expenses of instruction. The amount for other expenses is based on the historic level (approximately $8.50 per child in the elementary schools) adjusted annually to reflect increases in district basic program income (state and local funds).

The calculation procedure is complicated by the different grade level voucher values. The site value for K-6 students is calculated first by dividing the sum of budgets for the elementary basic program by the number of regular (nonspecial education) K-6 students in elementary schools. The resultant K-6 site basic voucher value is then multiplied by the number of sixth grade students in middle schools. The product of this multiplication is subtracted from the sum of budgets for the middle school basic programs to yield the amount of funds available for the seventh and eighth grade site basic voucher. This amount is divided by the number of seventh and eighth grade students in the district to determine the 7-8 voucher value.

This method of calculation insures that the total value of all site basic vouchers is sufficient to cover the salaries of all school personnel with whom the district has contract obligations. Further, it limits (for the district as a whole) the amount of discretionary money in the site basic voucher to an amount only slightly greater than past expenditure for other expenses of instruction.

Class Size. The amount of discretionary dollars in the site basic voucher could, in theory, be increased by a mini-school if it were to give up certificated teachers or other personnel. However, in Alum Rock, financial and legal constraints have limited the freedom

of mini-school staffs to trade teachers for discretionary funds. These restrictions have kept the pupil:teacher ratio in the voucher elementary schools within the range of 27:1 to 32:1.

In the demonstration, firm guarantees of job tenure and salary require that places in schools be found for all teachers under contract with the district. Thus, the money which would be earned by a mini-school by giving up a teacher cannot be freed up by the release from employment of a certificated person. These funds have to come from the district's small undisturbed reserve. Mini-schools might be willing to trade high class size for discretionary funds; if permitted, the district would face a financial crisis if limits on class size were not imposed. The effective controls have been state law and teacher union agreements.

First, the California school codes contain provisions which restrict class size in the primary grades (1-3) to approximately 31 students for every teacher. And second, agreements between teachers and administrators in Alum Rock stipulate that the pupil:teacher ratio of an elementary school *as a whole* (composed of several mini-schools) be maintained at 29:1 when all teachers (including categorically funded teachers) are counted. Within these constraints, individual mini-schools have secured significant amounts (several thousand dollars in one case) of discretionary monies by having relatively high pupil:teacher ratios. Since the district-wide pupil:teacher ratio is approximately 29:1 in the elementary schools, mini-schools which exceed this ratio gain unencumbered funds while other mini-schools and nonvoucher schools must have ratios lower than 29:1.

Average Salaries: Another significant aspect of financial arrangements in the voucher demonstration has been the use of average salaries to equalize the cost to mini-schools of instructional and support personnel.

Theoretically, instructional units should be required to pay the actual cost (including fringe benefits) of personnel employed to carry out the educational offering. This would force staffs to consider the most cost beneficial patterns of staffing, the value of technological substitutes for personnel, and the relative contributions of lower and higher salaried teachers.

However, instructional units have been charged the district-wide average salary for principals, assistant principals, teachers, secretaries, and custodians. This procedure was adopted because, due to significant variation between mini-schools in the salary levels of personnel, some mini-schools would have insufficient income from their basic vouchers to pay for even a minimum complement of instructional personnel, while other mini-schools would have large amounts of funds left over for curriculum materials and equipment. (The teacher average salary ranges from $10,000 to $15,000 in the mini-schools.) Such an eventuality has been viewed as intolerable by the District because even if one were willing to "penalize" students for attending schools with experienced, high salaried teachers, the school staffs themselves are incapable of adjusting to the situation by transferring out or firing expensive personnel.

To equalize the cost of personnel to the mini-schools, a system of subsidies and contributions has been installed. Mini-schools with salary obligations below average cost must give up the difference (taken from their site basic voucher income) to subsidize mini-schools with salary levels above the average. The amount a mini-school is subsidized or contributes is displayed on the monthly mini-school income/outgo budget reports.

Another similar kind of inequity surfaced during the attempt to voucherize the district. It was revealed that the cost *per pupil* for building administrative personnel (principals, assistant principals, secretaries, and custodians) for mini-schools in schools with small enrollments (usually schools with relatively small physical plants) was much greater than that cost per pupil for mini-schools in school buildings with large enrollments. Even after the inequalities of salary level for the administrative personnel are removed (by using average salaries), it remains that mini-schools in large buildings have a distinct financial advantage over mini-schools in small buildings.

A system of per pupil budgetary charges for building personnel was recommended for the second year of the demonstration by the income/outgo budget design staff. This charging procedure would eliminate

the inequalities of building size which are beyond the control of mini-school staffs since district policy requires that every building employ a principal, assistant principal (in middle schools), secretaries, and custodians.

Fixed Income. The system of financial voucherization which has evolved in Alum Rock departs from pure voucher theory in that schools do have sources of invariable, or fixed, income. Theory suggests that the income of an instructional unit should vary directly with (weighted) enrollment.

In fact, in Alum Rock, a significant amount of income which does not increase or decrease with changes in enrollment during the year is allocated to schools. The administrative allowance is a flat sum ($25,000 the first year) given to all schools regardless of size. The amount of the inservice allowance is determined by the enrollment of mini-schools at the beginning of the year, and is not changed during the year if enrollment rises or falls. Income for psychological services, curriculum coordination, and audio-visual services has been similarly fixed at the beginning of the year. Alum Rock has a "curriculum voucher" (unrelated to the voucher demonstration) of $30 which is granted directly to individual teachers. This amount does not vary with enrollments. Schools also receive income from several categorical programs, including Model Cities, the district's Community School Program, and Title I (and in 1973-74, SB-90 funds from the State), which does not change with student transfers during the school year.

Finally, during the first year, because of difficulties with the computerized attendance system, compensatory voucher funds were allocated to mini-schools based on the enrollment of eligible students on the 20th of October 1972. Later changes in the enrollment of compensatory voucher students were not reflected in the mini-school budgets.

Four arguments have been advanced to justify fixed income allocation procedures rather than voucherization. First, by limiting the number of variable income sources, the data processing problem (financial and attendance) was simplified and the time required to design program and debug the computer system was shortened. Second, legal restrictions prevent the voucherization of income from a number of

federal and state sources. Third, at this stage in the process of decentralization and voucherization, the school level administrative task is made manageable by creating areas of certainty--that is, fixed income. And finally, fixed income should be guaranteed for activities that require heavy initial investments which cannot be liquidated if enrollment declines.

This brief description of the financial voucherization of Alum Rock indicates the complexity and difficulty involved in changing from the traditional *in kind* system of resource allocation to a dollar-based enrollment economy. Three factors, touched on at various points in the discussion above, have shaped the implementation of the voucher concepts:

1) firm guarantees of job tenure and salary;
2) an organizational principle of equity which has precluded large scale dislocations of resources and control over resources; and
3) the need for certainty regarding income in order to plan and carry out educational programs.

Within the complex structure, involving a mandatory central services payback, constraints on class size, the use of average salaries, sources of fixed income, and subsidies and contributions, basic voucher dollars do actually "follow the child." Once the budgets of the mini-schools have been set up at the beginning of the school year, incorporating all the provisions for equalization, basic voucher dollars flow among mini-schools in parallel with student transfer activity. Mini-schools which suffer losses in enrollment automatically have their reserve accounts reduced; and if losses are substantial, expenditure budgets must be cut.

To account for the flow of funds among the voucher schools, a computerized mini-school "income/outgo" budgeting system has been created. The inputs and outputs of this system are described later in this report. Table 1 below presents in summary form the resources allocation rules implemented in the voucher demonstration.

Table 1

VOUCHER DEMONSTRATION RESOURCE ALLOCATION VALUES AND BASES
(1972-1973 and 1973-1974)

	Income Source	1972-1973	1973-1974
1.	Basic Source	K-6: $787.86/pupil*	K-6: $842.63/pupil
		7-8: $1041.38/pupil	7-8: $1047.38/pupil
	Central Services Payback	$259.53/pupil	$289.63/pupil
2.	Compensatory Voucher	K-6: $237.77/eligible	K-6: $275/eligible
		7-8: $301.55/eligible	pupil**
3.	Administrative Allowance	$18,000 flat grant for each school	First year - $25,000 Second year - $20,000
4.	Inservice Allowance	$30,000	First year - $50/pupil. Second year - $10/pupil.
5.	Psychological Services	$6.73/pupil	$7.75/pupil
6.	Curriculum Coordinators	$7.46/pupil	$10.73/pupil
7.	Educational Media	$4.76/pupil	$5.68/pupil
8.	Curriculum Voucher	$30/Program Teacher	$30/Program Teacher
9.	Carryover Funds	None (except inservice allowance--see No. 4)	Funds not spent 1972-1973 may be carried over.
10.	Categorical Income (Title I, Model Cities, SB 90, Title VII, etc.)	Flat grants to schools allocated on basis of economic disadvantage, educational need, and for continuation of programs already in existence in schools.	
11.	State Excess Cost for Education of Special Students (Programs:)	Special education programs budgeted centrally	Allocated to special education mini-schools on a per-class basis. Amount varies by program
12.	Special Education Subsidy	Special education programs budgeted centrally	Allocated to special education mini-schools to pay for district mandated additional personnel.
13.	Basic Program Subsidy of Contribution	A reduction of or addition to basic voucher income. Equals the difference between actual salaries of basic program personnel and the average salary cost of these personnel.	

*Pupil in average daily enrollment.

**Mayfair School receives $50/eligible pupil and a flat Title I grant. Students in Conniff's Title VII program are not eligible for compensatory vouchers.

III. THE VOUCHER FINANCIAL INFORMATION SYSTEM

All federal voucher demonstration grants to Alum Rock have included a "special condition" requiring the district to develop and implement an "income/outgo budget" for the voucher mini-schools. The system was designed during the first year of the project and was in operation at the beginning of the second year. The income/outgo report, to be distributed monthly to the mini-schools, displays the income changes, and corresponding expenditure budget changes, resulting from student transfer during the report period.

In the income/outgo accounting system, each mini-school is treated as an independent accounting entity; that is, as a budget, or cost, center with a self-balancing budget. The report shows a mini-school's sources and amounts of income and its expenditures, encumbrances, and unencumbered balance. The computer program which produces the report automatically adjusts the mini-school's reserve account at the end of the period to reflect changes in projected annual basic and compensatory voucher income.

Why an Income/Outgo Accounting System is Needed

Financial accounting systems are constructed to provide information for decision makers. In Alum Rock we find four groups of decision makers: the school board, district administrators, school staffs, and community members. The financial information which these groups require in a voucher education system can best be understood in terms of three salient characteristics of that system: decentralization of the design of instructional programs and the selection of resource inputs, parent choice, and an enrollment economy.

Teachers are deeply involved in designing educational programs and selecting resource inputs. They need to know how much discretionary income is available for their mini-school; how much of it already has been spent; and how much is left to be spent.

Parents in making their choice of instructional programs for their children need to know the priorities given by the mini-schools to various purposes, activities, and resources. In addition, parents

should be able to verify that mini-school income is in fact being spent for the purposes advertised in promotional literature. And, further, parents should be aware of rising or falling enrollments as a clue to the satisfaction or dissatisfaction of other parents with mini-school performance.

Finally, the enrollment economy of the voucher district requires that the accounting system have the capacity to automatically adjust a mini-school's projected annual income. Since, during the year, only estimates of the actual average daily enrollment for the full year are available, and since students are free at any time to transfer from one mini-school to another, school staffs need periodic reports on the income trend in order to make appropriate changes in expenditure budgets.

The income/outgo system and its monthly report, described below, meets these needs of parents and school staffs. In addition, the system will furnish the financial information normally required by the school board, district administration, voters, and outside organizations and individuals. These needs relate to the financial condition and expenditure accountability of the district. Mini-school budgets can be aggregated to the building level and combined with the budgets of non-voucher schools to provide a picture of total district activity, of the degree to which board policies are being carried out, and of the general financial position of the district.

The Monthly Report of the Income/Outgo Budgeting System

The periodic report for each mini-school contains three sections: an income report, an expenditure report, and a cost analysis section.

The income report shows, for each income source (such as Basic Voucher, Compensatory Voucher, Model Cities, Administrative Allowance, Psychological Services, and so forth), the budget at the beginning of the school year, the budget at the beginning of the current report period, the amount of change during the period, and the projected annual income at the end of the period. In addition, it displays the amount of subsidies or contributions incurred by the mini-school

The expenditure report shows, for each program (such as Basic Instruction, Music, Compensatory, Physical Education, Model Cities, and others) and account within program (teacher salaries, equipment, basic supplies, and so forth), the budget at the beginning of the school year, the budget at the end of the current report period, adjustments made during the period, this-period and year-to-date expenditures and encumbrances, and the unencumbered balance at the end of the period. The report displays totals for individual programs, all programs, and the reserve accounts which absorb minor fluctuations in income.

The cost analysis report is a supplementary document containing comparative financial data for the voucher district. Comparisons can be made of expenditure budgets for,

a) accounts within programs,
b) total program,
c) total of all programs,
d) reserve accounts, and
e) total of all programs and reserve accounts.

Two forms of comparison are available at each of these levels of aggregation. First, the expenditure budgets at the end of the current period can be compared with,

a) the budget at the beginning of the school year (the board approved budget),
b) a hypothetical budget based on average salaries (the expenditure report uses actual salaries), and
c) a hypothetical budget based on districtwide per pupil expenditures.

The second form of comparison available from the cost analysis report is between actual budgeted expenditure in a mini-school and the average actual budgeted expenditure of all mini-schools. Thus, for each account, program, and all programs, the observer can compare the level of expenditure per pupil budgeted in one mini-school with the average for all mini-schools. Any, by looking at the reports of individual mini-schools, any desired comparison between mini-schools in budgeted expenditure per pupil can be accomplished.

Production of the Income/Outgo Report

The income/outgo report is prepared monthly, with the reporting period corresponding to the Santa Clara County fiscal calendar periods. Three financial inputs are required by the computer program which produces the mini-school income/outgo report. First, expenditure data (encumbrances and expenditures) are obtained from the district's computerized expenditure ledger system. Second, the status of basic and compensatory voucher incomes of the mini-schools at the end of the report period is picked up from the voucher dollar allocation report (VDAR). The VDAR uses data generated by the Alum Rock Attendance System (ARAS). And third, amounts of changes in mini-school income from non-voucherized sources is provided by the voucher accountant. The income/outgo program generates its reports from these three data sets.

The Impact of Mini-school Accounting

Alum Rock has progressed from districtwide accounting for instructional resources to the school level and now to the mini-school level. The district is as close as any in the nation to accounting for resources by classroom.

These changes have not been easily accomplished. The number of budget centers has leaped from one to more than ninety. District-wide, the purchase orders which must be presented have increased in three years from 3000 to more than 10,000. The rules governing resource allocation have become so complex that it has been impossible to develop standard forms for school staffs to compute their own budgets. The district has had to employ an experienced systems analyst to design and install new student and financial accounting systems. And a new position in the hierarchy, that of Controller, has been created to head the accounting department and revamp the purchasing and payroll systems.

The financial voucherization of the district has evolved slowly. But now, in the second year of the demonstration, mini-school income/outgo reports are being produced monthly. The impact on the district

of the availability of financial information at the mini-school level will be the focus of future investigation. At this time, we will suggest two possible consequences of significance.

First, the existence of financial data for mini-schools will make an issue of the role of the district's Board of Trustees in school and mini-school expenditure decisions. The question has already been raised by Board members, at the final budget session in August 1973, whether, by approving the State required budget document (which is a function and object for the district as a whole), they were also giving their approval to every mini-school budget.

And second, the financial data at the mini-school level will highlight the relationship between money and the nature of the instructional program which can be provided. The educational value of different kinds of personnel, materials and equipment, and support services will be increasingly questioned. The fact that something must be given up in order to purchase something else will be more clearly realized at the mini-school level and teachers may seriously consider alternate ways of achieving goals.

IV. SCHOOL AND MINI-SCHOOL BUDGET LEVELS

The voucher demonstration started before the budget machinery to adequately support it was ready. The year before the demonstration, however, was a year of phasing into a partially decentralized school system and the voucher demonstration funding carried with it a special condition that a school level budgeting system be developed. During the 1972-73 year, however, the information at the *school level* is caught in the middle between the conventional line-item district budget format and the emerging school level budget design. Budget information at the mini-school level is even more elusive, but is worth retrieving in order to establish a mini-school budgetary baseline for the 1972-73 voucher demonstration. Mini-school budgets are shown in Appendix A.

The school level budget includes funds for the basic instructional program (Program 111 for elementary school students and Program 141 for middle school students), a subject allocation for middle school students, categorical aid programs and, for the voucher schools, Program 120 - Internal Voucher Schools. The Internal Voucher School's money is the budgeted amount for the compensatory voucher.

The basic voucher in the voucher schools is equivalent to the budgeted amount for Program 111 - Elementary Education or Program 141 - Middle School Education.

The voucher elementary schools show a median of $472 per student--considerably lower than the $535 median of the nonvoucher schools--and a range of $458 to $637 per student. Pala has a per student amount of $683 for Program 141--slightly higher than the median of $669 for the nonvoucher middle schools. (See Tables 2 and 3.) The differences are not related to either school size (the larger number of students yields a lower per student figure) or to the salary differences of the school's teaching staff.

The dollars per student for the twenty-two mini-schools ranged from less than $625 per student to more than $830 per student. (See Fig. 1.) Two mini-schools, the Goss 7th Grade School ($612) and the Meyer Basic Skills ($586) are below $625 per student and two mini-schools. Miller Individualized study ($969) and Pala Creative Arts ($897) are above $850 per student.

Table 2

1972-73 DISTRIBUTION OF FUNDS (DOLLARS PER REGULAR STUDENT)
ELEMENTARY SCHOOLS

	Total $/St.	Elementary Program 111	Title I	Comp.[a] Voucher	Other[b]
Title I Schools					
San Antonio	915	623	292		--
Arbuckle	816	538	246		32
Hubbard	782	534	248		
Mayfair	724	481	243		
Slonaker	722	449	240		33
Median		534			
Voucher Schools					
Cassell	704	523		168	13
Goss	682	458		179	43
McCollam	669	472		195	2
Meyer	662	455		159	48
Miller	898	637		236	25
Median		472			
Non-Title I/Non-Voucher Schools					
Painter	654	649			5
Dorsa	563	538			25
Cureton	552	549			3
Ryan	552	552			--
Linda Vista	554	533			20
Rogers	503	500			3
Shields	463	461			2
Lyndale	452	449			3
Median		535			

[a]The elementary level (K-6) compensatory voucher was $237,77 for students eligible for the free lunch program. The cost/student shown here is based on total enrollment of regular students. For Miller school, almost all the students apparently are eligible for the free lunch program.

[b]Model Cities and Community School programs.

An examination of the *mini-school* budgets within the voucher host-school also reveals some interesting variations. (See Fig. 2.) Here the variations can be explained, in most part, by variations in the enrollment of both the host-school and the mini-school. For example, assuming an average salary for a principal (with fringe benefits) of $25,500, the per student cost for the principal's function is $36 for a large 700-student school and $57 for a smaller school of 450 students. The principal's salary is then allocated to a mini-school based on the number of students enrolled in the mini-school. The same size mini-school, say, 100 students, in the larger school

Table 3

1972-73 DISTRIBUTION OF FUNDS (DOLLARS PER REGULAR STUDENT)
MIDDLE SCHOOLS

	Total $/St.	141-52 Mid. Sch. + Ex. Curr.	Comp.[a] Voucher	Mid. Sch. Lib.	Other[b]
Non-Voucher Schools					
Mathson	893	821[c]	---	18	54
Sheppard	716	688	---	15	13
George	670	649	---	21	---
Fisher	665	630	---	15	20
Median		669			
Voucher School					
Pala	859	683		23	---

[a]The middle school level compensatory voucher was $301.55 for students eligible for the free lunch program. The cost per student is based on total enrollment of regular students. At Pala, 387 students out of 601 apparently were eligible.

[b]Model Cities and Community Schools Programs.

[c]Mathson has a "special allowance" of approximately $90,000 or $138/student.

bears $3,600 of the salary while in the smaller school the same service--the principal's activities--is $5,700.

The mechanics of the practice are deceptively simple and were developed to deal with the accounting set-of-mind that demands formula-based allocation of all monies to a cost center. The mini-school budget developed in this way provides a misleading picture of the school's use of resources. The 300-student mini-school does not require three times as much of the principal's effort as the 100-student mini-school. The same problem arises with allocating the school secretary's and the custodian's salaries. The practice has a modicum of sense in treating the allocation of the cost of instructional supplies or instructional equipment. The requirement for these items are student-related--the greater the number of students, the greater the quantity of materials.

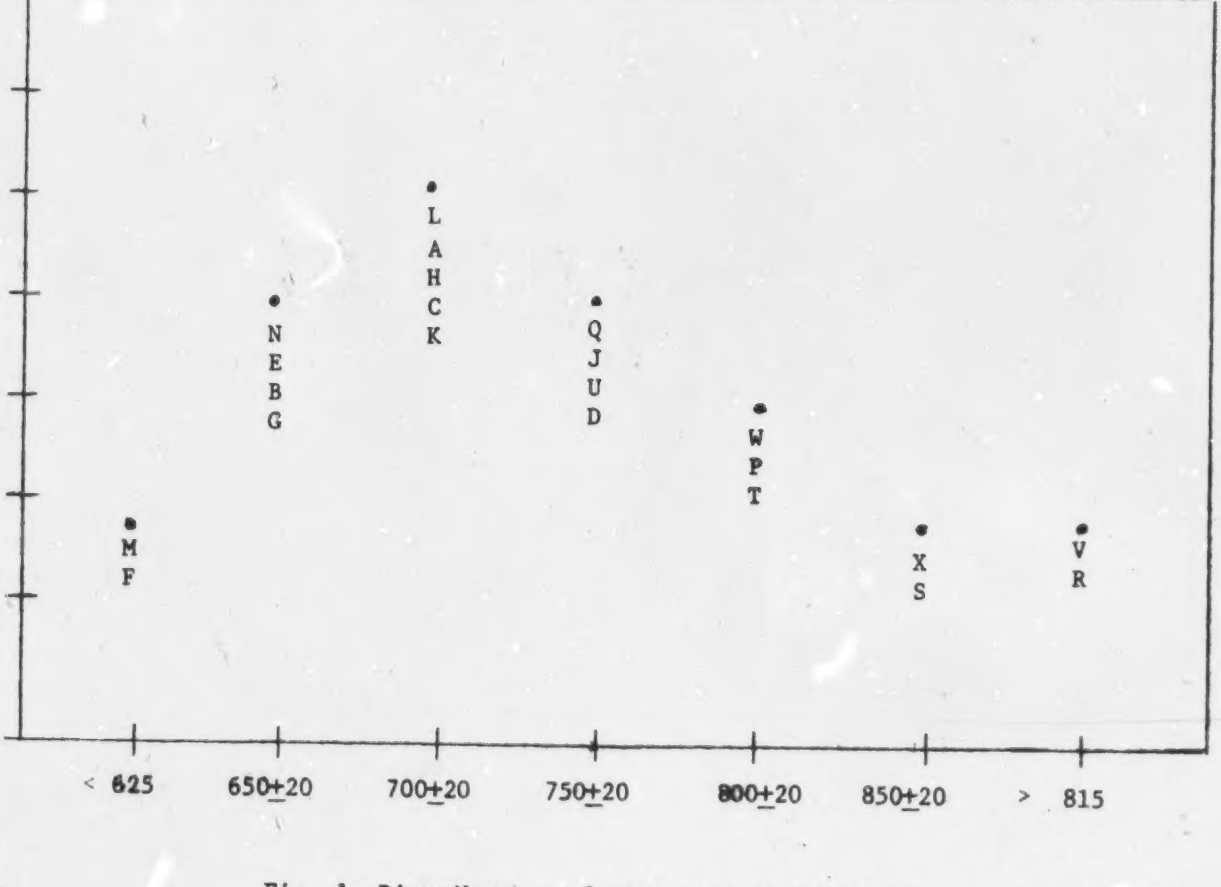

Fig. 1--Distribution of mini-schools by dollars per regular student

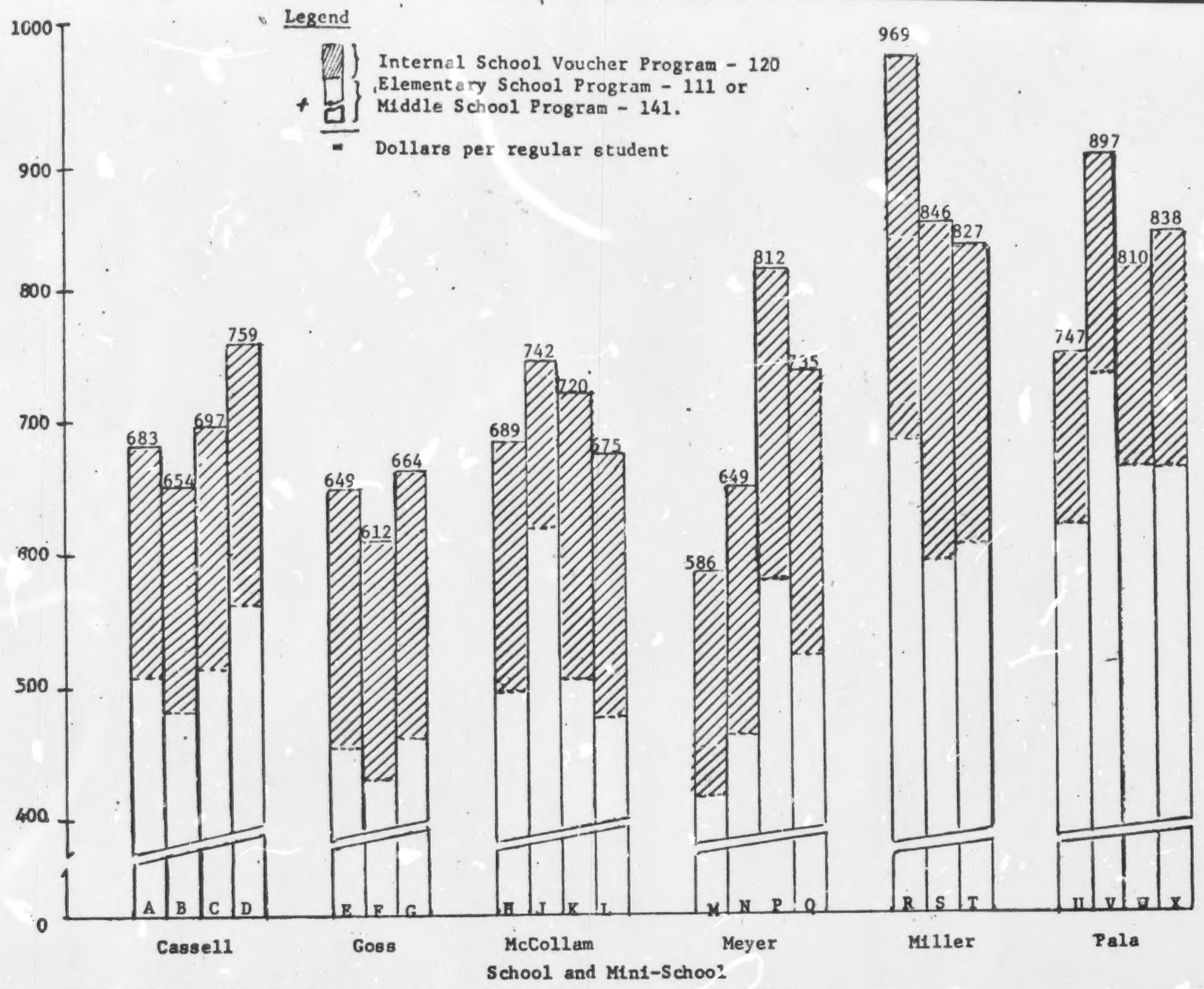

Fig. 2--Dollars per regular student--by school and mini-school

V. MINI-SCHOOL EXPENDITURE PATTERNS

Two sources of data provide a picture of the different manner in which the mini-schools planned to spend and spent their discretionary compensatory voucher funds. The first source is the mini-school budget. Each mini-school provided a budget showing planned expenditure of these funds for teachers, aides, instructional materials, instructional equipment, field trip transportation, portable classroom space (in one host school) and conferences. The interest lies in the different patterns of expenditure and not in the actual dollars of the compensatory voucher budget.

The second source is the purchase order forms used by the mini-schools to requisition materials, equipment supplies and instructional services. Arrangements were made to obtain copies of the requisition but there is no guarantee that copies of all requisitions were made. But here again, the accuracy of the dollars spent is of lesser importance than the pattern of expenditure for the mini-schools.

Estimated Expenditure Patterns for Compensatory Voucher Funds

Each mini-school had a compensatory voucher budget for the discretionary use of the mini-school faculty and the principal of the host school. The dollar amount of the budget was determined by the number of eligible students times the compensatory voucher valued at $237.77 for K-6 and $301.55 for 7th and 8th grades. The number of eligible students was based on those qualifying for the free lunch program who were enrolled in a particular mini-school as of October 1972. One of the purposes of the resource data collection and analysis was to develop a picture of how the different mini-schools spent their compensatory voucher funds.

The compensatory voucher funds for each mini-school, shown in Tables 4 and 5, do not include funds that were used for voucher related administrative costs, inservice training, management training, the EVAC or other indirect costs at the school-site level. Table 5 is organized by host school while Table 6 is organized using the instructional program orientations developed for the analysis of

Table 4

COMPENSATORY VOUCHER EXPENDITURE PATTERN
(Percent by Budgeted Program and Schools)

SCHOOL AND MINI-SCHOOL	Teachers	Aides	Materials	Equipment	Field Trips	Portables	Conferences
Cassell							
Cultural Arts	--	22	55	13	10	--	--
Daily Living	--	20	51	23	06	--	--
Traditional	--	29	48	17	06	--	--
Kindergarten	--	22	68	10	--	--	--
Goss							
Activity-Centered	09	39	23	12	05	12	--
7th Grade School	--	22	15	05	26[4]	32	--
Develop. Reading	25	26	22	11	04	12	--
McCollam							--
Traditional	--	04	74	12	10	--	--
Enrichment	--	--	97	--	03	--	--
Contin. Progress	19	05	68	03	05	--	--
Individualized	--	03	87	06	04	--	--
Meyer							
Basic Skills	--	25	61	10	04	--	--
Sullivan-BRL	--	15	60	20	05	--	--
Fine Arts	--	23	57	17	03	--	--
School 2000	--	14	81	--	05	--	--
Miller							
Individualized	--	--	90	10	--	--	--
Multi-Cultural	46	24	11	07	10	--	02
Academic	45	--	55	--	--	--	--
Pala							
Three R's Plus	--	--	86	06	07	--	01
Creative Arts	--	44	48	--	08	--	--
Fine Arts	--	--	69	31	--	--	--
Math/Science	--	--	94	--	06	--	--
Avg. of Programs	07	15	60	09	06	03	--

Table 5

COMPENSATORY VOUCHER EXPENDITURE PATTERN
(Percent Budgeted by Program Orientation)

PROGRAM ORIENTATION		Teachers	Aides	Materials	Equipment	Field Trips	Portables	Conferences
Basic Skills - General								
Cassell	- Traditional	-	29	48	17	6	-	-
"	- Kindergarten	-	22	68	10	-	-	-
McCollam	- Traditional	-	4	74	12	10	-	-
"	- Enrichment	-	-	97	3	-	-	-
"	- Cont. Progress	19	5	68	3	5	-	-
"	- Individualized	-	3	87	6	4	-	-
Meyer	- Basic Skills'	-	25	61	10	4	-	-
"	-	-	14	81	-	5	-	-
Miller	- Individualized	-	-	90	10	-	-	-
"	- Academic	45	-	55	-	-	-	-
Pala	- Three R's +	-	-	86	6	7	-	1
Basic Skills - Specific								
Goss	- Develop. Reading	25	26	22	11	4	12	-
Meyer	- Sullivan-BRL	-	15	60	20	5	-	-
Pala	- Math/Science	-	-	94	-	6	-	-
Fine Arts								
Meyer	- Fine Arts	-	23	57	17	3	-	-
Pala	- Fine Arts	-	-	69	31	-	-	-
Multi-Cultural								
Cassell	- Cultural Arts	-	22	55	13	10	-	-
Miller	- Multi-Cultural	46	24	11	7	10	-	2
Activity-Centered								
Cassell	- Daily Living	-	20	51	23	6	-	-
Goss	- Activity Center	9	39	23	12	5	12	-
"	- 7th Grade School	-	22	15	5	26	32	-
Pala	- Creative Arts	-	44	48	-	8	-	-
Avg. of Programs		7	15	60	9	6	3	-

differences and similarities among the twenty-two mini-school programs. It should be noted that the expenditure patterns are for the compensatory voucher funds only.

The expenditure categories used are certified staff (teachers) classified personnel (aides), instructional materials (including supplies and consumable materials), instructional equipment, field trips, portable classroom space and professional meetings (conferences).

By expenditure category, the average over all of the 22 mini-schools reveals that about 60 percent of the money was spent for instructional materials with aides next highest but considerably lower at 16 percent. Equipment, additional teachers and field trips accounted for 9, 8 and 6 percent, respectively. One school, Goss, allocated the cost of portable classroom space to the mini-schools and another (Miller) explicitly called out a major multicultural conference. At Goss, the field trip category for the 7th Grade school is not field trips in the usual sense of the term; the mini-school leased facilities away from the host school for part of the school year.

Except for Goss, the schools spent the most money on instructional materials. Within the host school (Table 6, Cassell showed the most even pattern for its mini-schools. Four schools, McCollam, Goss, Miller and Pala showed a great deal of variation among their mini-schools.

By schools, two schools, Goss and Miller, had expenditure patterns different from the overall average by expenditure category and one school, McCollam showed a high 82 percent for instructional materials with about 5 percent in each of the other major categories.

When the mini-schools are grouped by program instructional orientation (Table 7), a split seems to appear between mini-schools emphasizing basic skills and fine arts and those with a multi-cultural or activity-centered orientation. This is not as marked a difference when it is noted that three of the six mini-schools with multi-cultural and fine arts orientation cause the lower averages for these groupings.

Within the basic skills groupings (both general and specific) only one mini-school, the Goss Development Reading varies significantly from the overall averages of the groupings.

While these expenditure patterns for the compensatory voucher funds provide a quick overview of resource use by the mini-schools, additional insights can be gained from the analysis of the resources "requisitioned" by each mini-school. During the summer of 1972 and the 1972-73 school year, each mini-school used forms to requisition instructional items or services.

Requisitioned Instructional Materials, Equipment and Services

The host school administrators and mini-school faculties all used purchase order forms to requisition instructional materials, supplies, equipment and transportation for field trips. Other forms were used to record expenditures for inservice training, conference and meeting attendance and payment for special instructional consultants. These forms, in most cases, showed the item, the quantity and cost and the account to be charged. In a few instances, the same items of the same type were charged to different account numbers. This usually happened within a few days' time, so the likelihood of not knowing the correct account to use is rather small. A better guess as to why it occurred might be simple carelessness.

One host school permitted an inordinate number of requisitions to go through showing only "teacher pick-up of instructional supplies." This notation provides no information about the nature of the items purchased. All items such as this were charged by the host school to the catch-all account 02900--Other Expenses of Instruction. This account was also incorrectly used by the school-level requestor for items that were clearly bus transportation for field trips or instructional equipment and that had separate account numbers of their own. These are 5980--Study Trip Transportation and 2690--Instructional Equipment.

In estimating the distribution of requisitioned instructional materials and equipment (shown in Tables 6 and 7), the requisitions were sorted by mini-school and by the nature of the purchase without regard to the account number identified. The purpose was to get a better idea of the split between more durable instructional materials and those that were consumable supplies in nature.

Table 6

DISTRIBUTION OF REQUISITIONED INSTRUCTIONAL MATERIALS AND EQUIPMENT
(By Host School)

Mini-Schools	Percentage Distribution			
	Materials	Supplies[a]	Equip.	Services[b]
Cassell				
Cultural Arts	36	38	19	07
Daily Living	41	27	25	07
Traditional	56	20	17	07
Kindergarten	76	13	05	06
Goss				
Activity-Centered	37	27	31	05
7th Grade School	23	11	11	55
Developmental Reading	43	23	34	--
McCollam				
Traditional	56	09	35	--
Enrichment	83	05	12	--
Continuous Progress	61	19	20	--
Individualized	69	05	26	--
Meyer				
Basic Skills	53	23	22	02
Sullivan BRL	78	08	14	--
Fine Arts	37	14	48	01
School 2000	34	27	23	16
Miller				
Individualized	39	04	57	--
Multi-Cultural	49	27	24	--
Academic	45	40	15	--
Pala				
Three R's Plus	65	15	06	14
Creative Arts	33	49	18	--
Fine Arts	23	25	52	--
Math/Science	87	08	05	--
Resource Center	87	--	13	--
Average-Individual Programs	51	20	24	05

[a] Includes consumable materials and admission tickets on field trips.

[b] Includes requisitioned bus transportation and special instructional services.

Table 7

DISTRIBUTION OF REQUISITIONED INSTRUCTIONAL MATERIALS AND EQUIPMENT
(By Program Orientation)

Mini-Schools	Percentage Distribution			
	Materials	Supplies[a]	Equip.	Services[b]
Basic Skills - General				
Cassell - Traditional	56	20	17	7
Kindergarten	76	13	5	6
McCollam - Traditional	56	09	35	--
Enrichment	83	05	12	--
Continuous Progress	61	19	20	--
Individualized	69	05	26	--
Meyer - Basic Skills	53	23	22	2
School 2000	34	27	23	16
Miller - Individualized	39	04	57	--
Academic	45	40	15	--
Pala - Three R's Plus	65	15	06	14
Basic Skills - Specific				
Goss - Devel. Reading	43	23	34	--
Meyer - Sullivan BRL	78	08	14	--
Pala - Math/Science	87	08	05	--
Fine Arts				
Meyer - Fine Arts	37	15	48	--
Pala - Fine Arts	23	25	52	--
Multi-Cultural				
Cassell - Cultural Arts	36	45	19	--
Miller - Multi-Cultural	49	27	24	--
Activity-Centered				
Cassell - Daily Living	41	27	25	7
Goss - Activity-centered	37	27	31	5
7th Grade School	23	11	11	55
Pala - Creative Arts	33	49	18	--
Average - Individual Programs	51	20	24	5

[a]Includes consumable materials and admission tickets on field trips.

[b]Includes requisitioned bus transportation and special instructional services.

The expenditure patterns of the mini-schools within groupings are in most cases quite different--much more so than within host-schools. This most likely results from the different administrative practices of each host school.

The expenditure patterns do, however, vary within host schools. The greatest variation is within Pala where the Math/Science mini-school shows 87 percent for materials, 8 percent for supplies and 5 percent for equipment while the Fine Arts mini-school shows 23 percent for materials, 25 percent for supplies and 52 percent for equipment.

Examination by mini-school program orientation reveals the highest average classroom cost for the Basic Skills-Specific and pay additional teachers and thus had less money to spend for instructional materials; Goss charged its mini-schools for portable classroom space with a similar outcome--less money for direct instructional purposes.

Approximately 2000 requisition forms are included in the data base and should provide a reasonable pattern of expenditure and an average classroom cost for instructional materials in each of the 22 mini-schools. The focus is primarily on the relative differences among the mini-schools in their use of discretionary funds rather than on financial accountability.

Examination by mini-school program orientation reveals the highest average for materials was the Basic Skills-Specific. Fine Arts, with 30 percent, was the lowest of the program groupings. The Multi-Cultural program grouping shows the highest percent for supplies. In comparing individual mini-schools with the overall average, Pala's Math/Science Meyer's Sullivan BRL and McCollam's Enrichment mini-schools show a much higher than average expenditure on instructional materials. Four other mini-schools (Cassell-Kindergarten, McCollam-Continuous Progress, McCollam-Individualized and Pala-Three R's Plus) also spent higher than average 51 percent on instructional materials.

The analysis of the requisitions provides insights into the way the mini-schools spent a particular pot of money allocated to them through a broader accounting category of "Other Expenses of Instruction." Once the requisition form is entered into the budgeting and accounting system the information about <u>what</u> was bought is lost because only the

dollars are of interest. It is the variety of items purchased with funds in "Other Expenses of Instruction" that makes the difference in resource use for the mini-schools.

VI. COMPARABLE MINI-SCHOOL INSTRUCTIONAL COST

Inevitably, a cost per student for each of the twenty-two mini-schools will be calculated by various people for different purposes. One of the most important purposes, perhaps, would be to get an idea of the cost of a particular combination of resources that seems to work. The twenty-two mini-schools of the 1972-73 voucher demonstration do represent alternative ways to provide elementary education. The expectation of voucher proponents is that in the long-run, one of the outcomes may well be a more effective education. If this should prove to be true, then the next questions to be answered are: "Can the alternative be afforded?" and "How does the cost of the more effective alternative compare with other alternatives?"

If the budget data are used the cost will be biased by such things as the size of the mini-school and the actual teacher salaries. The objective here is to explore the development of another measure--the instructional cost per classroom. The instructional cost per classroom, estimated for each mini-school, provides a more useful picture of alternative levels of resource-use.

As defined, the instructional cost per classroom includes teacher, resource teacher and instructional aide salaries (with fringe benefits, as applicable), instructional materials, equipment and supplies (consumables) and the cost of field trips. It does not include a pro-rated share of the non-instructional expenses of running the school site, such as the principal's salary, the secretary's salary, clerical services or custodial services. The exclusion of these expenses is an important feature of the measure; the instructional cost per classroom becomes a *measure of the resources involved in the educational process at the classroom level*. This assumes, of course, a classroom homogeneity of resource-use within the mini-school, as observed in the 1972-73 mini-schools.

Another feature of the measure is its use of across-the-board average salary figures for the staff involved. This avoids differences among mini-schools that are attributable solely to salary differentials rather than to resource mix of levels of use. The resulting instructional cost per classroom provides a more equitable basis for the mini-school program cost comparisons that are bound to occur.

The instructional cost per classroom can also be used as a basis for calculating a cost per student for the mini-school by assuming thirty students for each classroom. The cost per student derived in this manner is insensitive to minor variations in the number of students in the mini-school (its size) and serves as an index in comparing the different mini-schools. In this way, the circularity implicit in the conventional practice of estimating the cost per student can be avoided. Recall the manner in which the principal's salary, for example, was allocated to the mini-schools of the host school. In the case of teacher salaries, the total is divided by the number of students in estimating the cost per student. In the real world, if the teacher salary total is $91,997, then the cost per student for, say, 224 students is $411--a figure which changes as the enrollment changes up to the point where an additional teacher is needed. If the enrollment drops to 203, the cost per student for teachers is $453 but an increase to 245 students would probably necessitate adding a teacher. The class size would be too high at 35 students per classroom, but the cost per student would be a much lower $375. Number juggling aside, the point is that the use of the instructional cost per classroom and a constant 30 students for each classroom provides an index-like measure when the cost per student is used as a basis for comparing the mini-schools.

The instructional cost for each mini-school, the instructional cost per classroom and the cost per student are all based on the cost of items that are used by the mini-school in providing their program. It is, in essence, the cost of the package of instructional services unique to a particular mini-school. As mentioned earlier, the non-instructional expenses of running the school site are not included. Neither is the cost of space. Excluding the cost of space deserves a separate discussion.

The objective is to measure the resources that make one mini-school different from another in carrying out the instructional program of the mini-school. In the transition model of the voucher only the public school system is involved in the 1972-73 school year and the mini-schools represented only a reorganization of the existing resources of the

district. All students were provided with "space" on a uniform basis. There are no significant variations in the manner in which the mini-schools used space. Including the cost of space to the estimate of a mini-school's instructional cost per classroom does not change the relative ranking of a mini-school. In an accounting sense, however, the cost of space would be important and, as private instructional entities become involved in the voucher demonstration, the cost of space would be a factor in assessing the resource-use characteristics of alternative mini-schools.

In developing the estimates of the instructional cost per classroom, it is further assumed that all classrooms are furnished in much the same way and that a similar package of basic instructional materials is provided for each classroom. These assumptions seem to be valid except for the McCollam Enrichment mini-school. This mini-school is also supported by State funds under the Mentally Gifted Minor program; in addition, budgetary data revealed a higher per student allocation for some of the central district services and supplies.

The estimate provided here for the Enrichment mini-school may be low because actual resources are used in developing the estimate and because this mini-school had an extremely low number of students eligible for compensatory voucher funds. This mini-school faculty refused to provide any information about the materials being used, about field trips taken or about other details of their operation. The Enrichment mini-school faculty's claim to the title of "the cheapest mini-school" may be true. There is no reasonable basis for increasing the estimate. It could be conjectured, however, that the Enrichment classrooms started from a richer material and equipment status than did the other mini-school classrooms. They were identified as the classrooms for the district-desegregated mentally gifted minors in the years before the voucher demonstration.

The details of the estimated instructional cost per classroom for each mini-school are shown in Appendix B. These detail tables provide supporting information about the differences in resource-use among the mini-schools discussed earlier.

In developing the estimates, the time aides worked and the time spent in a specific mini-school varied; some aides worked six hours a

day, while others worked three hours. Time in the mini-schools of a host-school varied from an hour to six hours a day. In estimating the instructional cost per classroom, aide use is calculated in 3-hour equivalents. For example, a 6-hour aide is the equivalent of two 3-hour aides. This technique is necessary and logical in developing an index measure, or comparable cost estimate for the mini-schools. In the financial context of the district, it is not an acceptable technique because the 3-hour aide does not receive fringe benefits but the 6-hour aide does. Assuming a fringe benefit package of twenty percent of base salary, two 3-hour aides can be employed for twenty percent less than one six-hour aide.

This example serves to highlight the non-accounting/budgeting nature of the estimated instructional cost per classroom. The estimates are intended as comparable measures of resource-use by the various mini-schools and by design, do not reflect the realities of financial accountability.

The instructional cost per classroom and cost per student for each of the mini-schools are shown in Table 8 and Fig. 3. The instructional cost per classroom ranged from a low of $17,312 for the McCollam Enrichment mini-school to a high of $22,315 for the Pala Fine Arts mini-school. When just the elementary grades (K-6) are considered, the Meyer Sullivan-BRL mini-school with $21,874 has the highest instructional cost per classroom. The instructional cost per classroom provides, on an equitable and supportable basis, additional information useful in looking at the differences among mini-schools.

The instructional cost per student, on a 30 students in a classroom basis, provides insights into the differences in resource-use among the mini-schools of particular host-schools. The widest variation was within McCollam where the highest mini-school spent $109 more than the lowest mini-school. Variations within Cassell and Meyer were also substantial. The interesting point is that all of the elementary grade mini-schools are providing elementary education but with a difference of about $150 per student. In a district of 12,000 elementary

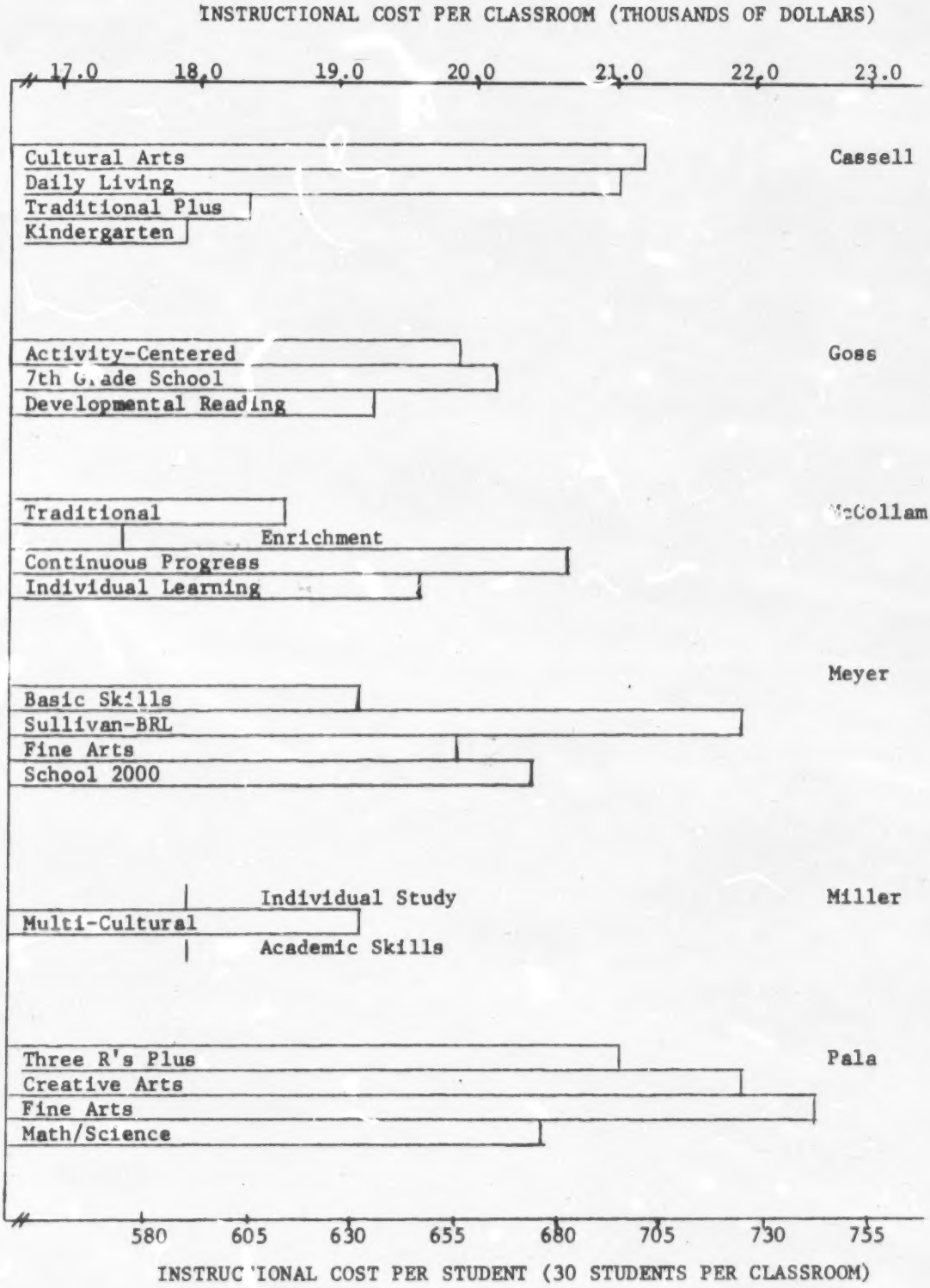

Fig. 3.--Comparable mini-school instructional cost per classroom and instructional cost per student

Table 8

MINI-SCHOOL INSTRUCTIONAL COST PER CLASSROOM, COST PER STUDENT COST PER STUDENT AND DOLLAR DIFFERENCE WITHIN HOST-SCHOOL

Mini-School	Instructional Cost Per Classroom	Instructional Cost Per Students[a]	Difference
Cassell			
Cultural Arts	$21,178	$706	
Daily Living	18,416	614	$97[b]
Traditional Plus	18,256	609	
Kindergarten	17,810	594	
Goss			
Activity-Centered	$19,809	$660	
7th Grade School	20,072	669	$82
Developmental Reading	19,095	637	
McCollam			
Traditional	$18,448	$615	
Enrichment	17,312	577	$109
Continuous Progress	20,591	686	
Individualized Learning	19,536	651	
Meyer			
Basic Skills	$19,000	$633	
Sullivan-IML	21,874	729	$96
Fine Arts	19,734	658	
School 2000	20,268	676	
Miller			
Individual Study	$17,768	$592	
Multi-Cultural	19,013	634	$43
Academic Skills	17,734	591	
Pala			
Three R's Plus	$20,956	$699	
Creative Arts	21,816	727	$64
Fine Arts	22,315	744	
Math/Science	20,386	680	

[a] Based on 30 students in a classroom not on actual enrollment.

[b] The Kindergarten Mini-school is excluded from this range of differences.

students this could mean an expenditure difference of $1.8 million a year. This assumes, of course, that the outcomes of the particular combination of resources are acceptable.

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Appendix A

SCHOOL AND MINI-SCHOOL BUDGET DATA FROM ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT EXPENDITURE BUDGET, 1972-73

Table A-1

SCHOOL AND MINI-SCHOOL BUDGET DATA--CASSELL

Category	Budget Program Code	Host School Total	A Cultural Arts	B Daily Living	C Traditional Plus	D Kindergarten
Number of Students	--	683	159	195	217	112
Allocation Percentages	--	100	23	27	32	18
Internal Voucher School	120	$112,629	$ 25,883	$ 30,386	$ 36,103	$ 20,257
$/Student	--	165	163	156	166	181
Elementary School	111	350,765	80,676	94,707	112,245	63,137
$/Student	--	514	507	486	513	564
Model Cities	119	9,021	2,075	2,435	2,887	1,624
Total Budget	--	472,415	108,634	127,528	151,235	85,018
$/Student	--	692	683	654	697	759

Table A-2

SCHOOL AND MINI-SCHOOL BUDGET DATA--GOSS

Category	Budget Program Code	Host School Totals	E Activity-Centered	F 7th Grade School	G Developmental Reading
Number of Students	--	714	322	91	301
Allocation Percentage	--	100	45	12	43
Internal Voucher School	120	$126,481	$ 56,917	$15,096	$ 54,468
$/Student	--	177	177	166	181
Elementary School	111	324,381	145,971	38,926	139,484
$/Student	--	454	453	428	463
Model Cities	119	13,642	6,139	1,637	5,866
Total Budget	--	464,504	209,027	55,659	199,818
$/Student		650	649	612	664

Table A-3

SCHOOL AND MINI-SCHOOL BUDGET DATA-MC COLLAM

Category	Budget Program Code	Host School Total	H Traditional	J Enrichment	K Continuous Progress	L Individualized Learning
Number of Students	--	603	184	81	147	191
Allocation Percentages	--	100	33	7	27	33
Internal Voucher School	120	$113,269	$ 35,533	$ 9,814	$ 31,100	$ 37,322
$/Student	--	189	193	121	212	195
Elementary School	111	275,129	90,792	19,259	74,286	90,793
Mentally Gifted Minor	177	30,886	--	30,886	--	--
$/Student		507	493	619	505	475
Model Cities	119	1,565	516	110	423	516
Total Budget	--	421,349	126,841	60,076	105,808	128,631
$/Student	--	699	689	742	720	675

Table A-4

SCHOOL AND MINI-SCHOOL BUDGET DATA--MEYER

Category	Budget Program Code	Host School Totals	M Basic Skills	N Sullivan BRL	P Fine Arts	Q School 2000
Number of Students	--	760	366	154	117	123
Allocation Percentages	--	100	43	20	19	18
Internal Voucher School	120	$124,101	$ 52,944	$ 24,825	$ 23,584	$ 22,748
$/Student	--	163	145	161	202	185
Elementary School	111	355,596	152,907	71,119	65,563	64,007
$/Student	--	468	418	462	577	520
Model Cities	119	20,048	8,621	4,010	3,809	3,608
Total Budget	--	499,745	214,472	99,954	94,956	90,363
$/Student	--	656	586	649	812	735

Table A-5

SCHOOL AND MINI-SCHOOL BUDGET DATA--MILLER

Category	Budget Program Code	Host School Totals	R Individual Study	S Multi-Cultural	T Academic
Number of Students	--	469	141	193	135
Allocation Percentages	--	100	33	39	28
Internal Voucher School	120	$108,052	$ 36,537	$ 44,882	$ 26,633
$/Student	--	230	259	234	197
Elementary School	111	291,825	96,302	113,812	81,711
$/Student	--	622	683	590	605
Model Cities	119	11,629	3,838	4,535	3,256
Total Budget	--	411,506	136,677	163,229	111,600
$/Student	--	877	969	846	827

Table A-6

SCHOOL AND MINI-SCHOOL BUDGET DATA--PALA

Category	Budget Program Code	Host School Totals	U Three R's Plus	V Creative Arts	W Fine Arts	X Math/ Science
Number of Students	--	607	211	217	111	68
Allocation Percentages	--	100	32	39	18	11
Internal Voucher School	120	$ 91,775	$ 27,271	$ 35,792	$ 16,521	$ 12,191
$/Student	--	151	129	165	149	179
Middle School	141	233,665	74,773	91,129	42,060	25,703
$/Student	--	385	354	420	379	378
Other Middle School	142-151	173,771	55,607	67,771	31,279	19,114
$/Student		286	264	312	282	281
Total Budget	--	499,211	157,651	194,692	89,860	57,008
$/Student	--	822	747	897	810	838

Appendix B

INSTRUCTIONAL COST PER CLASSROOM

AND

INSTRUCTIONAL COST PER STUDENT

Table B-1

INSTRUCTIONAL COST PER CLASSROOM
CASSELL MINI-SCHOOL

Expenditure Category	Average Salary[a]	Cultural Arts A (159 St)		Daily Living B (195 St)		Traditional Plus C (217 St)		Kindergarten D (112 St)	
	$	#	$	#	$	#	$	#	$
Teachers	16,200	5	81,000	6	97,200	7	113,400	4	64,800
Aides (1 = 3Hr-Aide)	2,500	5	12,500	1	2,500	2	5,000	1	2,500
Instructional Materials		-	4,044	-	3,967	-	4,519	-	2,409
Instructional Supplies	-	-	4,379	-	2,577	-	1,625	-	415
Instructional Equipment	-	-	2,187	-	2,416	-	1,370	-	175
Other Costs of Instruction[b]	-	-	1,781	-	1,837	-	1,875	-	941
Mini-School Instructional Cost	-		105,891		110,497		127,789		71,240
Instructional Cost/Classroom	-		21,178		18,416		18,256		17,810
Cost per Student[c]	-		706		614		609		594

[a] Includes fringe benefits.

[b] Includes cost of field trips and contract instructional services.

[c] Based on 30 students per classroom

Table B-2

INSTRUCTIONAL COST PER CLASSROOM
GLSS MINI-SCHOOL

Expenditure Category	Average Salary[a]	Activity-Centered E (322 St)		7th Grade School F (91 St)		Develop. Reading G (301 St)	
	$	#	$	#	$	#	$
Teachers	16,200	10	162,000	3	48,600	9	145,800
Aides (1 = 3Hr-Aide)	2,500	7	17,500	2	5,000	5	12,500
Instructional Materials	-	-	4,736	-	1,147	-	3,464
Instructional Supplies	-	-	3,490	-	535	-	1,837
Instructional Equipment	-	-	3,952	-	561	-	2,665
Other Costs of Instruction[b]	-	-	6,410	-	4,373	-	5,590
Mini-School Instructional Cost	-		198,088		60,216		171,856
Instructional Cost/Classroom	-		19,809		20,072		19,095
Cost per Student[c]	-		660		669		637

[a]Includes fringe benefits.

[b]Includes cost of field trips and contract instructional services.

[c]Based on 30 students per classroom.

Table B-3

INSTRUCTIONAL COST PER CLASSROOM
McCOLLAM MINI-SCHOOL

Expenditure Category	Average Salary[a]	Traditional H (184 St)		Enrichment J (81 St)		Continuous Progress K (147 St)		Indiv. Learning L (191 St)	
	$	#	$	#	$	#	$	#	$
Teachers	16,200	6	97,200	3	48,600	5.5	89,100	6	97,200
Aides (1 = 3Hr-Aide)	2,500	2	5,000	-	-	3.3	8,250	1	2,500
Instructional Materials	-	-	4,400	-	2,636	-	3,127	-	11,623
Instructional Supplies	-	-	666	-	160	-	941	-	772
Instructional Equipment	-	-	2,767	-	399	-	990	-	4,462
Other Costs of Instruction[b]	-	-	656	-	141	-	547	-	656
Mini-School Instructional Cost	-		110,689		51,936		102,955		117,213
Instructional Cost/Classroom	-		18,448		17,312		20,591		19,536
Cost per Student[c]	-		615		577		686		651

[a]Includes fringe benefits.

[b]Includes cost of field trips and contract instructional services.

[c]Based on 30 students per classroom.

Table B-4

INSTRUCTIONAL COST PER CLASSROOM
MEYER MINI-SCHOOL

Expenditure Category	Average Salary[a]	Basic Skills M (366 St)		Sullivan-BRL N (154 St)		Fine Arts P (117 St)		School 2000 Q (123 St)	
	$	#	$	#	$	#	$	#	$
Teachers	16,200	12	194,400	5	81,000	4	64,800	4	64,800
Aides (1 = 3Hr-Aide)	2,500	5.5	13,750	4.5	11,250	2	5,000	3	7,500
Instructional Materials	-	-	9,923	-	12,834	-	3,156	-	2,825
Instructional Supplies	-	-	4,290	-	1,317	-	1,217	-	2,222
Instructional Equipment	-	-	3,996	-	2,375	-	4,118	-	1,866
Other Costs of Instruction[b]	-	-	1,645	-	600	-	645	-	1,860
Mini-School Instructional Cost	-		228,004		109,372		28,936		81,073
Instructional Cost/Classroom	-		19,000		21,874		19,734		20,268
Cost per Student[c]	-		633		729		658		676

[a]Includes fringe benefits.

[b]Includes cost of field trips and contract instructional services.

[c]Based on 30 students per classroom.

Table B-5

INSTRUCTIONAL COST PER CLASSROOM
MILLER MINI-SCHOOL

Expenditure Category	Average Salary[a]	Individual. Study R (141 St)		Multi-Cultural S (193 St)		Academic Skills T (135 St)	
	$	#	$	#	$	#	$
Teachers	16,200	6	97,200	7	113,400	5	81,000
Aides (1 = 3Hr-Aide)	2,500	2	5,000	4.5	11,250	2	5,000
Instructional Materials	-	-	1,419	-	3,128	-	1,061
Instructional Supplies	-	-	143	-	1,745	-	940
Instructional Equipment	-	-	2,096	-	1,568	-	368
Other Costs of Instruction[b]	-	-	750	-	2,000	-	300
Mini-School Instructional Cost	-		106,608		133,091		88,669
Instructional Cost/Classroom			17,768		19,013		16,200
Cost per Student[c]			592		634		540

[a]Includes fringe benefits.

[b]Includes cost of field trips and contract instructional services.

[c]Based on 30 students per classroom

Table B-6

INSTRUCTIONAL COST PER CLASSROOM
PALA MINI-SCHOOL

Expenditure Category	Average Salary[a]	Three R's Plus U (211 St)		Creative Arts V (217 St)		Fine Arts W (111 St)		Math/Science X (68 St)	
	$	#	$	#	$	#	$	#	$
Teachers	16,200	6	97,200	7	113,400	3	48,600	2	32,400
Resource Teachers[b]		-	16,038	-	18,954	-	8,262	-	5,346
Aides (1 = 3Hr-Aide)	2,500	-	-	5	12,500	2	5,000	-	-
Instructional Materials	-	-	7,525	-	2,230	-	1,040	-	2,344
Instructional Supplies	-	-	1,715	-	3,287	-	1,119	-	213
Instructional Equipment	-	-	722	-	1,172	-	2,395	-	139
Other Costs of Instruction[c]	-	-	2,535	-	1,170	-	540	-	330
Mini-School Instructional Cost	-		125,735		152,713		66,956		40,772
Instructional Cost/Classroom	-		20,956		21,816		22,315		20,386
Cost per Student[d]	-		699		727		744		680

[a]Includes fringe benefits.

[b]Pro-rated share of the Resource Center's teachers.

[c]Includes cost of field trips and contract instructional services.

[d]Based on 30 students per classroom.